

**NID Application**

***Benefits Calculation, Monetization, and Resiliency Tab***

***A.1: Project Conditions***

Separate Attachment – Megan

***Already created PDF***

## **NID Application**

### ***Benefits Calculation, Monetization, and Resiliency Tab***

#### ***A.2: Preliminary Operations Plan***

## **Reservoir Operations**

The proposed Centennial Water Supply Project would have a normal-maximum useable storage of 105,000 acre-feet (assuming 5,000 acre-feet of dead pool below the low-level outlet) and would be operated to provide maximum seasonal carryover storage in years where the balance of NID's water supply system is able to meet its service area demands. The proposed Centennial Reservoir would operate as a "fill-and-spill" project, with a prioritization of maximizing reservoir storage during the winter and early spring runoff period. During the water delivery period (late spring through early fall), Centennial Reservoir would be used in coordination with NID's existing reservoir network to provide water to customers in NID's lower Bear River watershed service area. Centennial Reservoir would be managed in coordination with NID's Rollins Reservoir upstream, as well as Lake Combie downstream, with diversions made to NID's Combie Phase I Canal (Figure 1). Centennial Reservoir could effectively be used in conjunction with NID's existing Rollins Reservoir to expand the total storage capability in the Bear River watershed. This use would allow additional water to be captured from diversions out of NID's Mountain Division system in the Yuba River watershed, as well as natural runoff in the Bear River watershed (both the runoff in excess of what Rollins Reservoir can store on a seasonal basis as well as the runoff in the sub-basin below the Rollins Dam catchment).

During the majority of years and as hydrologic conditions allow, Centennial Reservoir would be operated at or near its full gross storage (110,000 acre-feet) throughout the year, with any seasonal drawdowns due to minimum instream flow requirements, water supply deliveries, and evaporative losses. In the fall and early winter, Centennial Reservoir would store any watershed runoff (in excess of minimum instream flow requirements) in order to return the reservoir to full pool.

During a dry year, Centennial Reservoir storage would be used to augment the reliability of NID's water supply in the Bear River watershed. Seasonal drawdown would vary based on the severity of the annual (or multi-year) drought condition.

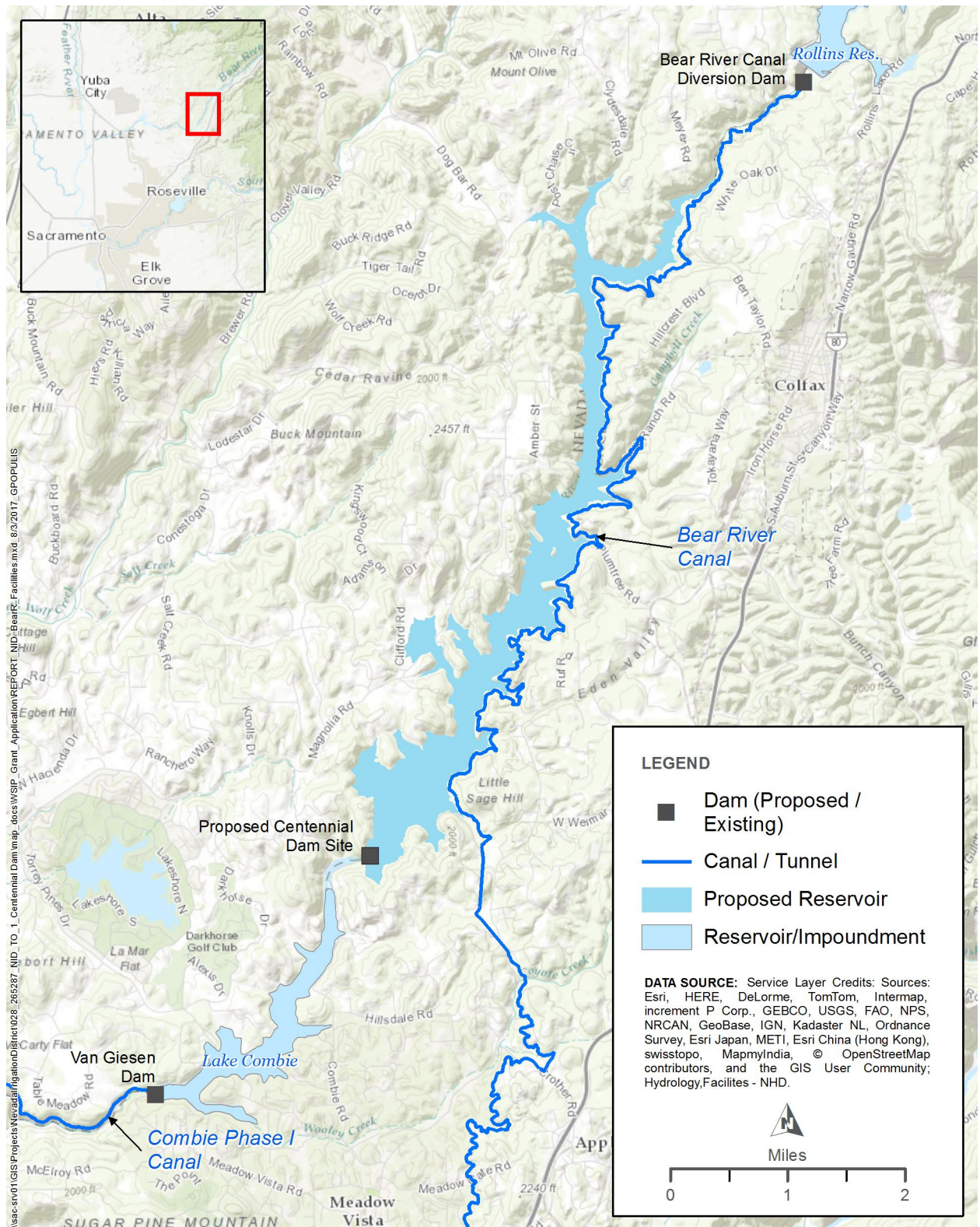


Figure 1: Bear River facilities map.

# Seasonal Releases

Releases from Centennial Reservoir would vary by season and hydrologic year type and would consist of a combination of minimum environmental flows (yet to be established), discretionary releases for water supply, and spill. Seasonally, flows in the Bear River below Centennial Reservoir are expected to peak in the late summer as water deliveries are passed through Centennial Reservoir (via Rollins Reservoir) for delivery to Lake Combie and NID's Phase I Canal. In most years, winter and spring spill can be anticipated through an ungated spillway during heavy rain events in the Bear River watershed. The lowest seasonal releases from Centennial Reservoir would occur during late fall through early winter in most years, as the reservoir refills from any mid-year drawdown and downstream water delivery demands wane.

# Coordinated Operations

Under current operations, demands at NID's Combie Phase I Canal are met through a combination of natural inflows to NID's Lake Combie (including from the upper Bear River watershed) and regulated releases from NID's Rollins Dam, which includes imported water from NID's Mountain Division watersheds in the Yuba River basin. The Combie Phase I Canal diverts directly from Lake Combie. With the Proposed Project, Centennial Dam and Reservoir would be used to store water released by Rollins Dam, which would be released as regulated outflow and/or spill for release at Lake Combie to the lower Bear River or diversion at the Combie Phase I Canal.

# Project Maintenance

There would be no permanent on-site personnel for maintenance and inspection. NID personnel would monitor the dam site facilities daily Monday through Friday. This would involve one or two staff traveling to the site in a pickup truck. Maintenance and inspection would typically include the following:

- Dam, spillway and intake – removing debris and vegetation
- Mechanical and electrical equipment – periodically exercising the valves and checking the valve actuators
- Instrumentation – taking manual readings of dam performance instrumentation
- Site area – repairing erosion areas and removing vegetation